



Date: May 10, 1999

From:



WHO Collaborating Center for
Research, Training and Eradication of Dracunculiasis

Subject:

GUINEA WORM WRAP-UP #90

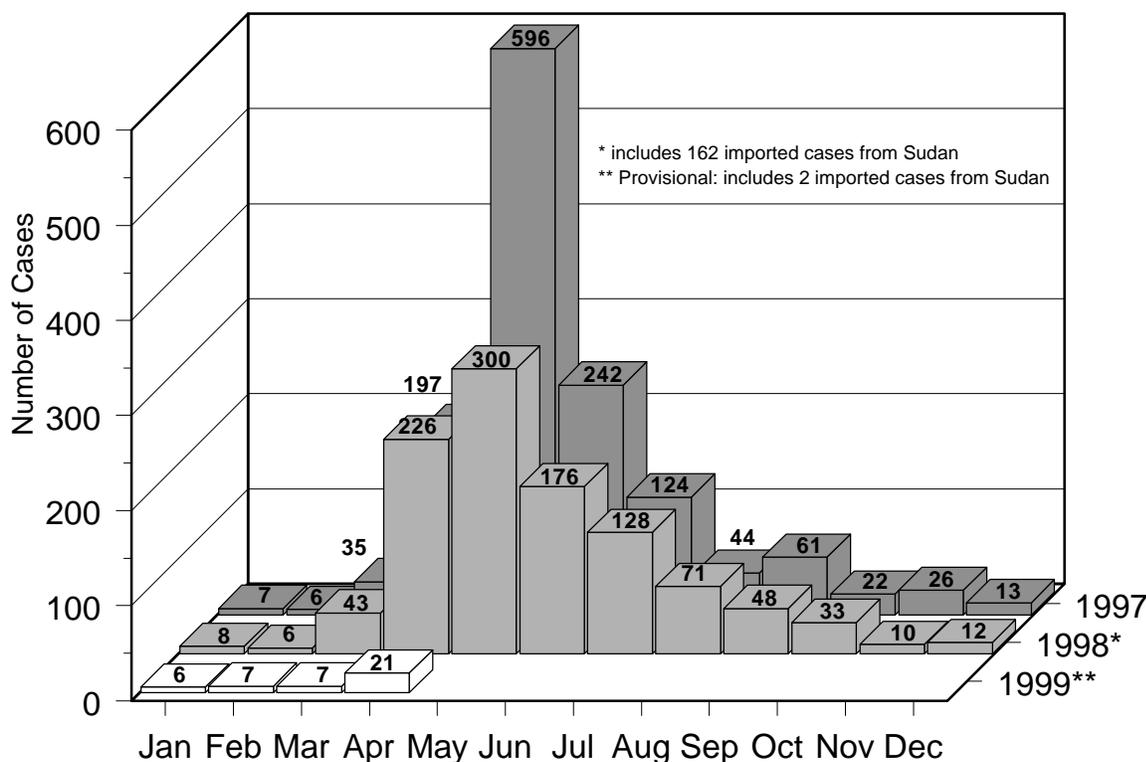
To: Addressees

Detect Every Case, Contain Every Worm!

UGANDA REDUCES CASES BY 91% IN APRIL!

Figure 1

**Uganda Guinea Worm Eradication Program
Number of Cases of Dracunculiasis Reported by Month**



Dr. J. B. Rwakimari, the national program coordinator, reports that only 20 indigenous cases of dracunculiasis were detected in April 1999, as compared to 213 indigenous cases in April 1998--a reduction of 91%! April is the first month of Uganda's annual peak transmission season, which continues through July (see Figs. 1 and 3). Kitgum, formerly the highest endemic district in Uganda, reported zero cases in March 1999, for the first time since Uganda's eradication program began with the assistance of The Carter Center/Global 2000 in 1992. During January - April 1998, a total of 18 cases (5 in March and 13 in April) were imported from Sudan, while only 2 cases (1 in January and 1 in April) were imported from Sudan during the same period in 1999. A total of 37 (90%) of the 41 cases reported in the country so far in 1999 have been contained. Congratulations to Dr.

Rwakimari and his colleagues, and to the UNICEF mission to Uganda, which is now providing most of the external assistance to this program.

In 1999, Uganda has extended the reward system for reporting of a case (which began in mid-1997) to include Karamoja (Kotido and Moroto Districts), thus covering the entire country. The program has also introduced Pond Care Takers in Kotido, Moroto and Kitgum Districts, to help ensure that no one with an emerging worm enters a pond. They are paid 5,000 shillings monthly (about US\$3.00).

In the first quarter of 1999, all countries outside of Sudan, Ghana and Nigeria have 63% fewer cases than in the same quarter of 1998.

GHANA CONVENES REGIONAL GUINEA WORM COORDINATORS



The regional coordinators of Ghana's Guinea Worm Eradication Program met in Accra on April 29 to review the status of the program, under the chairmanship of Dr. Sam Bugri, the national program coordinator. The provisional report of the meeting notes that the reward system is still not being implemented as intended. It also reports that "a re-thinking of the design of nylon filters indicates that the programme could save approximately 40% on the production costs of the filters by sewing a 6 inch square piece of nylon monofilament cloth in the middle of a 18 – 20 inch round piece of cotton material. Such modification allows cutting about 40 such 6 x 6 square inch pieces from each square yard/meter of nylon cloth, instead of only 3 – 4 pieces if the filtration unit is made entirely from nylon cloth."

Coordinators expressed concern over the fact that integration is in some instances hindering the programme's ability to perform. Some District Directors of Health Services are not according GWEP activities the high priority these require. Although cases may have reduced considerably or even been eliminated in a District, adequate resources still need to be employed to prevent the recurrence of cases. Since funds came in bulk to the districts for all programmes, there was sometimes a tendency to under fund GWEP activities. In general, the recognition of the fact that Guinea Worm Eradication is a priority, as established by the President of Ghana, does not seem to be adequately addressed. The Northern Region has set a good example by establishing a policy requiring that all reported cases of Guinea Worm be followed up by supervisory staff immediately when the case is notified.

Representatives of the Northern Region commented that the new Community-Based Surveillance system, which now reports on several diseases (including dracunculiasis) from all communities of the region, seems to be helping them to identify new Guinea worm cases, but that "integration" was hampering their ability to respond effectively to such reports. [The new system has also delayed the compiling of monthly dracunculiasis reports.]

The need to improve supervision of village volunteers and implementation of case containment were identified as other important problems for the program. Attendees at the meeting approved a definition of case containment and a list of key items for supervisory visits which will be provided to all participants in the program, including the village volunteers themselves, on a laminated sheet in order to ensure that a correct, consistent definition of case containment is applied, and to help improve supervision of the village volunteers (See facsimiles below).

GHANA GUINEA WORM ERADICATION PROGRAM

Supervision of GWEP village volunteers

During every visit by a supervisor, he or she should do the following:

1. Visit the village chief or elder to inform him of your mission. Answer any questions of the chief or elder.
2. Check the volunteer's book to make sure it is filled out properly.
3. Verify **every** new case of Guinea worm.
4. Verify if the new case(s) are contained or not contained. Make sure the Volunteer understands the definition of case containment (see back of card)
5. Fill a Case Form for **every** new case. Be sure to ask where the patient was one year ago.
6. Check to see if the Volunteer has bandaging supplies. Give the Volunteer any supplies they need.
7. Check a few households to see if there are any unreported cases. Ask the people in the households if they know their Volunteer. Check the filters to see if they are in good shape. See if the people know how to use the filter. Ask the people about Guinea worm to see if they understand the life cycle and how to prevent Guinea worm.
8. Take time to answer any questions of the Volunteer.
9. Sign and date the Volunteer's book.

The Volunteer should teach the people the following messages:

1. People get Guinea worm disease when they drink infected water. Water becomes infected when a person with Guinea worm goes into the water. If you drink the infected water today, the Guinea worm will emerge in about one year.
2. A person with Guinea worm should **never** go near water.
3. If a person thinks he has Guinea worm, he should see the Volunteer immediately.
4. You can prevent Guinea worm by filtering or boiling your water before drinking it. If a person drinks only pipe water, they will not get Guinea worm next year.
5. Patients receive c5,000 if they allow the programme to contain their case. Any person can get c2,000 if they are the first person to report a new case to the programme.

Case containment definition

Every case of Guinea worm disease is either:

1. contained by surgical extraction, or
2. contained by bandaging, or
3. not contained

1. A case of Guinea worm is contained by surgical extraction if all of the following are true:

- The worm(s) are detected before breaking through the skin.
- The worm(s) are extracted completely.
- The patient receives health education on how to prevent the spread of Guinea worm.

- The case is verified by a supervisor.
2. A case of Guinea worm is contained by bandaging if all of the following are true:
- The worm(s) are detected before they break through the skin or within 24 hours after the worms have broken through the skin. All worms receive bandaging and are **followed up until every worm is completely expelled** from the patient.
 - The patient is educated not to enter any water source if he or she has Guinea worm.
 - You are sure the patient has not contaminated a water source.
 - The case is verified by a supervisor.
3. If the case does not meet all of the criteria for either, 1) containment by surgical extraction, or 2) containment by bandaging, it is not contained.

If a community reports one or more cases of Guinea Worm disease, all water sources in that community must be measured and treated with Abate within 7 days of the first case.

Motivation of village volunteers and village-based health workers

Village volunteers and village-based health workers are the frontline workers in the Guinea Worm Eradication Program. Assuring that they are motivated to conduct active surveillance and effective containment of cases is one of the most important responsibilities of each national program. Although a few programs use cash incentives, most do not. We include here a list of some of the non-monetary incentives which programs may use to motivate such workers:

- frequent, regular, supportive visits by supervisor
- feedback re: status of the eradication campaign (in same village, district and nation)
- note percentage of his/her cases detected in <24 hours
- note percentage of his/her cases contained
- give written material, e.g., copy of Guinea Worm Wrap-Up
- provide necessary supplies, e.g., replenish first aid kits
- compliment on some aspect of his/her work, in presence of the village chief
- give the volunteer a photograph of him/herself (instant Polaroid works well)
- provide re-training (per diem, meet peers, foster friendly competition)
- provide bicycles, t-shirts, "Guinea worm cloth" etc.

Programs are encouraged to also devise other incentives that are suited to their circumstances and resources.

Table 1

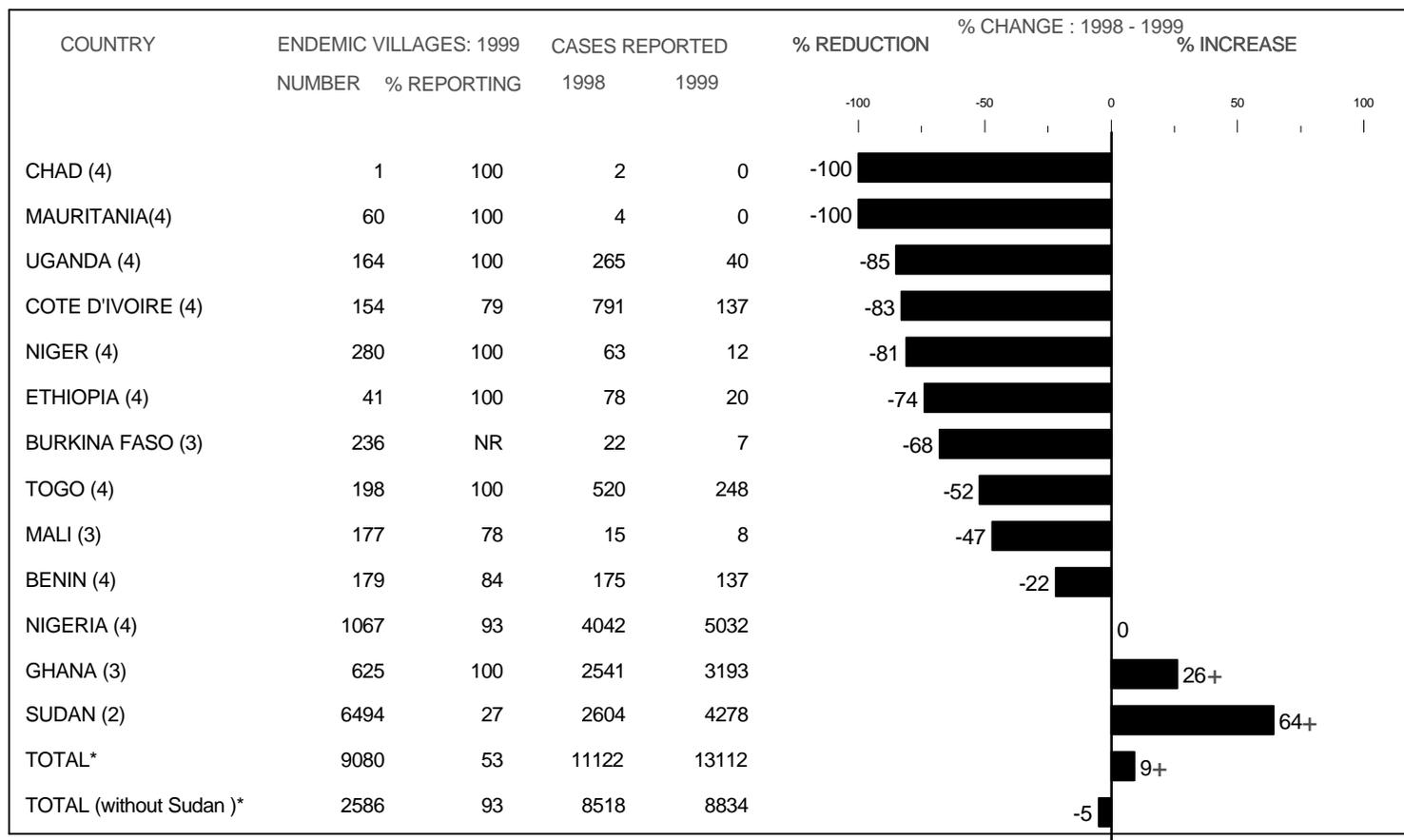
Number of cases contained and number reported by month during 1999*
(Countries arranged in descending order of cases in 1998)

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	1066 / 2085	1366 / 2429	340 / 629	/	/	/	/	/	/	/	/	/	2772 / 5143	
NIGERIA	596 / 1358	752 / 1432	902 / 1131	887 / 1111	/	/	/	/	/	/	/	/	3137 / 5032	62
GHANA	921 / 1140	616 / 1139	546 / 1000	/	/	/	/	/	/	/	/	/	2083 / 3279	64
NIGER	2 / 2	3 / 3	2 / 2	5 / 5	/	/	/	/	/	/	/	/	12 / 12	100
BURKINA FASO	0 / 0	0 / 0	7 / 7	/ 16	/	/	/	/	/	/	/	/	7 / 23	30
TOGO	87 / 102	57 / 84	15 / 28	33 / 34	/	/	/	/	/	/	/	/	192 / 248	77
COTE D'IVOIRE	58 / 58	32 / 43	31 / 33	16 / 28	/	/	/	/	/	/	/	/	137 / 162	85
UGANDA	3 / 6	7 / 7	7 / 7	20 / 21	/	/	/	/	/	/	/	/	37 / 41	90
BENIN	84 / 88	22 / 27	14 / 15	9 / 9	/	/	/	/	/	/	/	/	129 / 139	93
MALI	1 / 2	2 / 2	3 / 4	1 / 1	/	/	/	/	/	/	/	/	7 / 9	78
MAURITANIA	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	0 / 0	
ETHIOPIA	0 / 0	0 / 0	5 / 5	14 / 15	/	/	/	/	/	/	/	/	19 / 20	95
CHAD	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	0 / 0	
CAMEROON	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	/	1 / 1	100
TOTAL*	2818 / 4841	2857 / 5166	1873 / 2862	985 / 1240	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	8533 / 14109	60
% CONTAINED	58	55	65	79									60	

*provisional

Figure 2

Percentage of Endemic Villages Reporting and Percentage Change in Number of Indigenous Cases of Dracunculiasis During 1998 and 1999 *, by Country



* Provisional. Totals do not include imported cases.

(2) Denotes number of months for which reports were received, e.g., Jan. - Feb., 1999

NR Countries with unknown or low rate of reporting.

WHO CONFIRMS INTERRUPTION OF TRANSMISSION IN SENEGAL



The World Health Organization (WHO) conducted an external evaluation of Senegal's Guinea Worm Eradication Program from January 23 to February 9, in collaboration with Senegalese health authorities. The international team visited the headquarters of the national program in Dakar, all previously endemic districts, 17 health centers, and the 160 villages which have been under active surveillance since the program began in 1991. Team members confirmed the reliability of the surveillance system, but were disappointed that the epidemiological archives which will be essential to preparation of the dossier for official certification were only maintained centrally. Senegal has reported no case of dracunculiasis since July 1997.

The team made recommendations on interventions to sustain the interruption of transmission over the next two years. They also asked national health authorities to improve their system for collecting data monthly, and to preserve surveillance information at village and district levels as well as centrally. It was suggested that a surveillance notebook be made available to all village health workers for keeping their records. The team also recommended that efforts to improve availability of safe drinking water in formerly endemic areas be sustained, in order to eliminate the risk of reintroduction of the disease, that introduction of a reward for reporting of a case would increase the sensitivity of the surveillance system, and that the program should establish "rumor registries" to keep track of investigations of suspected cases. Members of the evaluation team were: Dr. Alhouseini Maiga, Mr. Cheikh Ndiaye, and Mr. Pierre Lucas of WHO; Dr. Issa Degoga of Mali's Guinea Worm Eradication Program; and Mr. Georges Ndiaye of the Senegalese Ministry of Health.

IN BRIEF:

Mali: Analysis of data from Mopti Region shows that in the 46 endemic villages where Abate was used in 1997, the average percentage reduction in cases in 1998 was 73%, compared to an average reduction of only 39% in the 36 endemic villages of that region in which Abate was not used in 1997. Mopti Region, which in 1998 recorded the highest number of cases in Mali, has reduced its cases by 94% in January-April 1999, compared to the same period of 1998: from 18 cases to one case.

Ghana: World Vision has struck a second high yield borehole in Savelugu. Dr. Martin Mandara, the WHO country director, has provided \$45,000 to the program on behalf of WHO to support purchase of 9 motorbikes, training of female volunteers in Northern Region, and re-training of 960 other volunteers.

Sudan: A quarterly coordination meeting was held in Nairobi, Kenya on April 19-20. The ten northern states of Sudan have -50% fewer cases during the first quarter of 1999 than in the same period of 1998. The Government of Saudi Arabia has pledged \$11 million to the Government of Sudan for improving water supply. Sudan's Ministry of Water and Irrigation will work with UNICEF/Khartoum in implementing the project, for which Guinea worm endemic communities will be a priority. During the coordination meeting, Dr. Nevio Zagaria of WHO shared the preliminary results of a field test of a Tutor's Guide that when finalized would help standardize training among the 20 NGOs involved in the Sudanese program under the auspices of Operation Lifeline Sudan and coordinated by Global 2000/The Carter Center.

Other: The months of peak transmission of dracunculiasis in each of the endemic countries is shown in figure 3. A similar graphic for districts and /or individual communities would help supervisors visualize quickly when cases are most prevalent and thus synchronize the mobilization of resources and the implementation of activities which need to be carried out before the onset of transmission.

NORWAY CONTRIBUTES \$1 MILLION MORE



Norway

Norway's Minister of International Development and Human Rights, The Honorable Hilde F. Johnson, recently informed former U.S. President Jimmy Carter of her government's decision to provide a further donation of 7.5 million Norwegian kroner (about U.S.\$1 million) to The Carter Center towards the eradication of dracunculiasis. This follows previous donations by Norway to The Carter Center of \$750,000 in 1994 and \$1 million in 1997 for the same purpose. Norway has also donated funds for Guinea worm eradication to UNICEF.

USAID DONATES ADDITIONAL \$0.5 MILLION



Mr. J. Brian Atwood, administrator of the United States Agency for International Development (AID), has indicated his agency's agreement to provide an additional \$500,000 to The Carter Center for the final phase of dracunculiasis eradication. In 1994 AID made a grant of \$3.5 million to The Carter Center for Guinea worm eradication. In addition, AID missions in Ghana, Mali and Uganda have each made significant contributions in former years to the Carter Center (Global 2000) for the eradication programs in those respective countries.

DISCUSSION LIST ON DRACUNCULIASIS ERADICATION (DRACERAD)



On April 1, 1999, the Dracunculiasis Eradication Project (DRA), which is part of the Eradication and Elimination Department of the World Health Organization (WHO), announced the creation of DRACERAD, an e-mail address (dracerad@who.int) on the Majordomo server, based at WHO in Geneva, Switzerland. Who is the Dracerad target audience? Field workers from currently or previously endemic countries, partners, staff from international agencies, NGOs, and institutions, or individuals involved or simply interested in dracunculiasis eradication. Why a discussion lists on dracunculiasis eradication? The aim is to initiate or participate in a discussion, share information and ideas, collect information and data and obtain answers to specific questions. Any DRACERAD subscriber can send a message to all the other subscribers at the above address. As messages come in by e-mail they are immediately dispatched to all subscribers by the list administrator, who ensures that every question receives an answer either by himself or by any other DRACERAD member. To subscribe to DRACERAD send an e-mail to the following address: majordomo@who.int Do not insert anything in the "Subject" line; insert only the words **subscribe dracerad** in the body of your message. Majordomo will subsequently confirm your subscription to DRACERAD.

WHO ORGANIZES PROGRAM REVIEW FOR ANGLOPHONE COUNTRIES, ABUJA, NIGERIA, 26-28 APRIL 1999

A program review for anglophone countries was convened in Abuja, Nigeria under the auspices of WHO on April 26 - 28. Representatives from Ethiopia, Gambia, Ghana, Kenya, Nigeria, and Uganda attended, as well as personnel from WHO and UNICEF. The most recent surveillance information from the remaining endemic anglophone countries is summarized in Table 1 and Figure 2. Summaries of country presentations and the meeting's recommendations are given below.

Uganda contained 79% of 1061 cases reported in 1998. This includes 162 cases imported from Sudan. Of the 241 endemic villages that had one or more cases during 1998, 62 (38%) reported only a single case each. Cloth filters are available in over 99% of households in endemic villages. Coverage of endemic villages with safe water supply has improved to 65%. All targeted ponds in endemic villages were under vector control in 1998.

Ethiopia contained 96% of 365 cases reported in 1998, in 62 endemic villages. The quality of case containment is believed to have improved due to retraining of promoters and village based workers in 1998 and posting of health promoters to live in endemic villages. All endemic villages have received cloth filters, 41% now have a safe water source, and Abate® was used in 40% in 1998. The program has recently gained access to the suspected endemic area of Nai ta, and expects to access previously inaccessible areas of Akobo District during the current transmission season.

Ghana contained 76% of 5,473 cases in 629 endemic villages in 1998. Filter coverage is estimated at 70-95% of endemic villages. Financial problems encountered early in 1998, and problems associated with the novelty of a new system of integration of activities early in 1998, were reflected in poor case containment early last year and a relatively high number of cases early in 1999.

Nigeria contained 76% of 13,420 cases in 1,067 endemic villages in 1998. This was an increase of 7% in cases over the 12,590 reported in 1997. About 57% of targeted water sources were treated with Abate®.

Kenya's last known indigenous case was in May 1994.

Gambia has not had an indigenous case of dracunculiasis in over a decade.

GENERAL RECOMMENDATIONS

Given that all participating countries have set December 2000 as a target date to stop local transmission of dracunculiasis, the participants at the review meeting recommend that :

1. the Ministries of Health seek and ensure adequate funding for guinea-worm eradication activities ;
2. the Ministries of Water Supply give high priority to endemic areas in provision of water supply ;
3. the partners in water sector, supporting agencies and donors continue their effort to support the national programmes ;
4. consultations and consensus on policy and programme implementation be strengthened among supporting agencies and between agencies and the Governments, in order to achieve the common target of eradication ;
5. the National Guinea Worm Eradication Programme :
 - intensify health education, case containment, re-training of community-based health workers ;
 - intensify and improve quality of supervision at village level ;
 - keep formerly endemic villages under active surveillance for three consecutive years (after the last case).

SPECIFIC RECOMMENDATIONS

1. ETHIOPIA

The Guinea Worm Eradication Programme in Ethiopia should :

1. prepare a plan of action (1999-2000) for currently inaccessible areas, particularly Akobo Woreda, and for raising funds so that implementation of interventions can be ensured as accessibility will permit ;
2. consider placing a village-based volunteer in each hamlet, where possible, for guinea-worm eradication activities ;
3. maintain the previously reporting period in data management and presentation.

2. THE GAMBIA

The Guinea Worm Eradication Programme in The Gambia should :

1. continue and strengthen its efforts to integrate guinea-worm surveillance with other Primary Health Care (PHC) activities ;
2. consider re-establish the case-reward system including establishment of a rumour register in all PHC facilities ;
3. re-train health facility staff to recognize, record, contain and report guinea-worm cases ;
4. make financial provision to support surveillance and certification activities of guinea worm.

3. GHANA

The Guinea Worm Eradication Programme in Ghana should :

1. ensure that all necessary funds are available before the beginning of each transmission season ;
2. include in the reporting system on guinea worm all the villages included in the integrated community-based surveillance system ;
3. revise the guinea-worm case definition used in the community-based surveillance system ;
4. give special attention to problem areas especially those with difficult access, e.g. «overseas» ;
5. gradually introduce integration to avoid work overload in guinea-worm high endemic villages ;
6. as soon as possible, set up an active surveillance system in all regions (except the Northern region) to detect all unknown endemic villages ;
7. differentiate between new endemic villages (never infected) and re-infected villages ;
8. report monthly to WHO and other partners using the standard format provided for this purpose.

4. KENYA

The Guinea Worm Eradication Programme in Kenya should:

1. put in place an active surveillance system to monitor the risk of reintroduction of the disease ;
2. consider establishing a programme coordination office near areas under surveillance ;
3. write a country report as background and consider conducting an external evaluation of the programme during 1999 ;
4. establish, as soon as possible, a 'rumour register' of alleged cases of dracunculiasis in all health facilities of at risk areas, and ensure prompt follow-up ;
5. consider constituting a national commission for the certification of eradication ;
6. start reporting monthly to WHO and other partners using the standard format provided for this purpose.

5. NIGERIA

1. The Federal Ministry of Health should have an overall control of the programme activities and provide necessary support to the National Coordination of the Guinea Worm Eradication Programme in Nigeria (NIGEP)
2. The National Coordination of NIGEP should ensure effective coordination of the programme activities

at all levels, and the development of specific work plans for each level;

3. The Guinea Worm Eradication Programme in Nigeria should :
 - 3.1 Involve local and opinion leaders at all levels in planning and implementation of the programme;
 - 3.2 integrate as much as possible programme management in the local health system at all levels ;
 - 3.3 improve quality of intervention by making village specific plans using available information ;
 - 3.4 report monthly to WHO and other partners using the standard format provided for the purpose;
 - 3.5 review as soon as possible, zone by zone, the current strategy implementation and define, in the light of past experience, new strategies that will move the programme ahead;
 - 3.6 seek adequate and timely supply of Abate and ensure its optimal use.

6. UGANDA

The Guinea Worm Eradication Programme in Uganda should:

1. cooperate with the security forces and train security personnel to assist programme activities in high risk (insecure) areas;
2. intensify interventions in the three districts with indigenous cases and continue the inter-district meetings;
3. consider paying more attention to potential transmission sites associated with “hidden” ponds by liaising with village elders, e.g. in regular meetings;
4. promote integration of guinea-worm surveillance with other community-based activities;
5. ensure that sub-country and district levels supervise endemic villages effectively and adequately;
6. consider expanding communal filtration use in close link with protection of ponds.

RECENT PUBLICATION

World Health Organization, 1999. Evaluation externe du Programme National d'Eradication du Ver de Guinee du Senegal. Report Final. WHO/CDS/CEE/DRA/99.5

Figure 4

Peak Transmission Months of Endemic Countries



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*Inclusion of information in the Guinea Worm Wrap-Up does not
constitute "publication" of that information.
In memory of BOB KAISER.*

For information about the GW wrap up, contact Trenton K. Ruebush, MD, Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: (770) 488-4532.

The GW Wrap-Up is also available on the web at http://www.cdc.gov/ncidod/dpd/list_drc.htm.

CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.

